



DOCKET NO.: 4538

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
IN THE MATTER OF THE APPLICATION FOR PATENT

OF: Claus HOFFJANN et al. | ART UNIT: 1724
SERIAL NO.: 10/613,530 | CONF. NO.: 4543
FILED: July 3, 2003 | EXAMINER: M. O. Savage
FOR: METHOD AND APPARATUS FOR PROCESSING AND RE-USING OF GRAY
WATER FOR FLUSHING TOILETS

MS AMENDMENT
COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

November 3, 2005

INFORMATION DISCLOSURE STATEMENT WITH CERTIFICATE OF MAILING

Dear Sir:

- 1) Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98 applicants enclose a Second Form PTO-1449, copies of references AP to AS cited thereon, and English Abstracts as indicated on Form PTO-1449.
- 2) In compliance with 37 C.F.R. §1.97(c), this Information Disclosure Statement is being filed before the mailing date of a Final Office Action or Notice of Allowance, and is accompanied by the required fee of \$180.00 (enclosed Credit Card Payment Form PTO-2038). Any fee deficiency or additional fee may be charged to Deposit Account 50-0507.
- 3) References AI to AO are in English. References AP and AS are accompanied by English Abstracts.

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- 4) Reference AP (DE 197 17 579) discloses a method of preparing disinfected water in a storage tank, to which microbial contaminated water is delivered through a supply line. This contaminated water is subjected to a short-term disinfection in the supply line before being delivered to the storage tank. To suppress the development of microorganism in the storage tank and in the connected lines leading to water-consuming devices, the water is additionally subjected to a long-term disinfection treatment in the storage tank. The short-term disinfection is preferably a UV radiation treatment, while the long-term disinfection treatment is preferably an electrolytic treatment. For this purpose, a portion of the water in the storage tank is removed from the storage tank and subjected to an electrolytic treatment, and is then again returned into the storage tank. The long-term disinfection treatment is regulated dependent on the quantity of the disinfecting substances electrolytically generated in the natural compositional components of the water, as present in the water of the storage tank. The long-term disinfection treatment can be regulated dependent on the quantity of free chlorine present in the water of the storage tank. Before the long-term disinfection treatment, a common saline solution can be dosed into the water in the storage tank. The electrolytic treatment can be carried out with DC current, of which the poles connected to the electrodes are reversed at suitable time spacings to prevent the formation of lime deposits.
- 5) Reference AQ (DE 296 18 711 U1) discloses an apparatus for disinfection or sterilization and continuous prophylactic

treatment of water-conveying technical plants. An electrolyzer is arranged in a line of the technical plant, and a device to make the water flow turbulent is connected upstream from the electrolyzer. An electrode packet of the electrolyzer has plate-shaped electrodes including end electrodes and bipolar electrodes, which are each respectively embodied as a cathode and an anode, inter-engagingly inserted in one another to face opposite one another and lie parallel to one another. The pertinent water line of the technical plant may be a water circulation line. A bypass line can be arranged parallel to the water circulation line, and a shut-off device is arranged between the inlet and the outlet of the bypass line. A shut-off device may also be arranged in the bypass line in the area of the inlet and of the outlet respectively. The shut-off devices in the bypass line may be ball valves.

- 6) Reference AR (DE G 94 17 730) discloses an apparatus for reusing gray water, comprising a gray water collection or storage tank, a pump for conveying the gray water from the tank to a gray water consuming device, and an electrolytic cell for carrying out an anodic oxidation so as to convert chlorides present in the gray water into hypochlorite. The electrolytic cell is arranged in an electrolysis container connected in a closed circulating loop to the storage tank. Particularly, a circulation loop line is connected to the pump in the storage tank, so that gray water flows through the electrolytic cell during operation of the pump. The water consuming device may be the flush tank of a toilet. The electrolysis cell may comprise one or more cathodes and

anodes that are arranged pair-wise extending longitudinally in the electrolysis cell with a channel provided therebetween. The cathode is embodied as a plate of titanium or a stainless steel, while the anode is embodied as a grid of titanium coated with a noble or precious metal oxide. The electrolytic cell converts the chlorides in the gray water to hypochlorite, which is a strong oxidizing agent, which kills microorganisms, so that the gray water does not develop an odor and an increasing contamination with microorganisms. The use of chemical disinfecting agents in the water can be avoided.

- 7) The Examiner is requested to consider all references of record, return an initialed copy of the enclosed Form PTO-1449 and ensure that all references of record are printed on any patent issuing from this application.

Respectfully submitted,
Claus HOFFJANN et al.
Applicant

WFF:ks/4538
Enclosures:
postcard,
Second Form PTO-1449,
4 references,
2 English Abstracts,
Form PTO-2038

By Walter F. Fasse
Walter F. Fasse
Patent Attorney
Reg. No.: 36132
Tel. No.: 207-862-4671
Fax. No.: 207-862-4681
P.O. Box 726
Hampden, ME 04444-0726

CERTIFICATE OF MAILING:

I hereby certify that this correspondence with all indicated enclosures is being deposited with the U. S. Postal Service with sufficient postage as first-class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

Karin Smith - November 3, 2005
Name: Karin Smith - Date: November 3, 2005

Walter F. Fasse
Walter F. Fasse 11/3/05

Sheet 1 of 1 SECOND IDS LIST OF REFERENCES CITED BY APPLICANT (FORM PTO-1449) DATED: November 3, 2005				Atty. Docket No.: 4538		Serial No.: 10/613,530	
				Applicant: Claus HOFFJANN et al.			
				U.S. Filing Date: July 3, 2003		Art Unit: 1724	
U. S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	Cl.	Sub- Cl.	Fil. Date
	AI	3,939,499	02/1976	Roberts	-	-	-
	AJ	5,245,711	09/1993	Oldfelt et al.	-	-	-
	AK	6,319,390	11/2001	Kono et al.	-	-	-
	AL	6,463,956	10/2002	Walker	-	-	-
	AM	2004/0031761	02/2004	Wunsche et al.	-	-	-
	AN	2004/0133968	07/2004	Hoehne et al.	-	-	-
	AO	2005/0126927	06/2005	Lindauer et al.	-	-	-
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NO.	DATE	COUNTRY	Cl.	Sub- Cl.	English
	AP	197 17 579	10/1998	Germany	-	-	Abstract
	AQ	296 18 711	02/1997	Germany (Utility Model)	-	-	no
	AR	G 94 17 730	02/1995	Germany (Utility Model)	-	-	no
	AS	O 653 520	05/1995	Europe	-	-	Abstract
OTHER DOCUMENTS							
EXAMINER'S SIGNATURE				DATE CONSIDERED			
<small>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>							